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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/084,793	02/25/2002	Yutaka Akiba	16869N-044400US	7870

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EXAMINER
HARPER, HOLLY R

ART UNIT	PAPER NUMBER
2879	

DATE MAILED: 04/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/084,793	AKIBA, YUTAKA
	Examiner	Art Unit
	Holly R. Harper	2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9, 11-13* is/are rejected.

7)☒ Claim(s) *10* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Preliminary amendment filed on 25 February 2002 has been entered.

Specification

1. The disclosure is objected to because of the following informalities:

On page 6, line 14, the flat electrode is referenced as element 31 in the drawings. It should be element 3a.

On page 11, line 11, the bus electrodes are referenced as elements 9a and 59a. They should be elements 59a and 59b.

On page 11, line 23, the protection layer is referenced as element 71, but in Figure 5, the protection layer is labeled element 11.

Appropriate correction is required.

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Plasma Display Panel with metal barrier plates with projections.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-4, 5, and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claim 1 recites the limitation "the cell space" in Line 6. There is insufficient antecedent basis for this limitation in the claim.

6. Claim 2 recites the limitation "the cell space" in Lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

7. Claim 3 recites the limitation "the cell space" in Lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

8. Claim 4 recites the limitation "the cell space" in Lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

9. Claim 5 recites the limitation "the surface" in Line 5. There is insufficient antecedent basis for this limitation in the claim.

10. Claim 7 recites the limitation "the surface" in Line 6. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. Claims 1-9 and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akiba (USPN 6,414,435) in view of Lee at al. (USPN 6,436,788) hereinafter "Lee".

In regard to claims 1-4 and 11, the Akiba reference discloses a plasma display device with address electrodes (Figure 1, Element 8), first display electrodes (Figure 1, Element 9-1), second display electrodes (Figure 1, Element 17) that intersect with the address electrodes, and a barrier plate including a metal electrode (Figure 1, Element 5). The Akiba reference discloses that the metal barrier walls reduce the diffusion of charged particles to the partition walls (Column 7, Lines 2-18), thus directing the flow. The

Akiba reference does not specify that the metal electrodes in the barrier plates have projections that project into the cell. The Lee reference teaches that a metal extraction grid projects into the display cell (Column 1, Lines 47). There are two symmetric projections that face each other and would overlap the second display electrode. The projections are used to concentrate and direct the flow of charged particles. Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to incorporate projections on the metal electrodes in the barrier walls, as taught by Lee, to help better direct the flow of charged particles.

In regard to claims 5-6 and 12, the Akiba reference discloses a plasma display device with a dielectric layer (Figure 15, Element 11), address electrodes (Figure 15, Element 8), first display electrodes (Figure 15, Element 9-1), second display electrodes (Figure 15, Element 17) that intersect with the address electrodes, and a barrier plate including multiple metal electrodes (Figure 15, Element 5-2a,b,c). The Akiba reference discloses that the metal barrier walls reduce the diffusion of charged particles to the partition walls (Column 7, Lines 2-18) thus directing the flow. The Akiba reference does not specify that the metal electrodes in the barrier plates have projections that project towards the cell and intersect with the first electrodes. The Lee reference teaches that a metal extraction grid projects into the display cell (Column 1, Lines 47). There are symmetric projections that face each other and would intersect with the first electrode. The projections are used to concentrate and direct the flow of charged particles. Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to incorporate projections on the metal electrodes in the barrier walls, as taught by Lee, to help better direct the flow of the charged particles.

In regard to claims 7-9 and 13, the Akiba reference discloses a plasma display device with a dielectric layer (Figure 15, Element 11) address electrodes (Figure 15, Element 8), first display electrodes (Figure 15, Element 9-1), second display electrodes (Figure 15, Element 9-2) that intersect with the address electrodes, flat electrodes (Figure 15, Element 17) and a barrier plate including multiple metal electrodes (Figure 15, Element 5-2a,b,c). The Akiba reference discloses that the metal barrier walls reduce the diffusion of charged particles to the partition walls (Column 7, Lines 2-18) thus directing the flow. The Akiba reference does not specify that the metal electrodes in the barrier plates have projections that project towards the cell and intersect with the first and second electrodes. The Lee reference teaches that a metal extraction grid projects into the display cell (Column 1, Lines 47). There are symmetric projections that face each other and would intersect the first and second electrodes. The projections are used to concentrate and direct the flow of charged particles. Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to incorporate projections on the metal electrodes in the barrier walls, as taught by Lee, to help better direct the flow of the charged particles.

Allowable Subject Matter

13. Claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 10, the references of the Prior Art of record fails to teach or suggest the combination of the limitations as set forth in claim 10, and specifically

comprising the limitation of the projections of the metal layers being formed on alternate layers.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Komaki (USPN 5,587,624) discloses electrodes with projections.

Amano (USPN 5,371,437) discloses spacer matrixes with electrodes.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Holly Harper whose telephone number is (703) 305-7908. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (703) 305-4794. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7382.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Holly Harper
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Art Unit 2879

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